

## **REMARKS**

Claims 1-20 are pending.

Claims 1, 2, 3, 4 and 13 have been amended. Claims 1 and 2 have been amended to address a claim objection discussed below as well as to clarify these claims. Claim 3 has been amended to remove "steps" language from this claim. Claims 4 and 13 have been amended to address a rejection to these claims discussed below. In relation to all of the above-mentioned amendments, no new matter is being added.

On page 2 of the Office Action, section 1 objections to Claims 1 and 2 as containing certain informalities. In this respect, Claim 1 has been amended to remove the reference numeral "50" at line 4 thereof. Additionally, the phrase "between two of the at least two sub-time slot" has been amended to recite "between two of the at least two sub-time slots".

Claim 2 has also been amended to correct the misspelling ("tow") of "two".

On page 2 of the Office Action (sections 2 and 3), Claims 4, 5, 13 and 14 are currently rejected as being indefinite for failing to particularly pointing out and distinctly claim the subject matter which Applicant regards as the invention. Applicants are traversing this rejection.

Claims 4 and 13 as currently amended now refer to the "time base" instead of the "communication slots" in order to address the above rejection.

On page 3 of the Office Action, Claims 1-10 and 12-19 are currently rejected under 35 USC § 103(a) as being unpatentable over US 2003/0142630 A1 (hereinafter referred to as "Budde et al.") in view of US 6,434,154 (hereinafter referred to as "Stacey et al."). Applicants are traversing this rejection.

The application presently contains three independent claims, namely Claims 1, 2 and 3. Below, Applicants explain that Budde et al. in combination with Stacey et al. do not teach all of the elements of Claims 1, 2 and 3.

As stated in paragraph [0003] of Budde et al., the invention disclosed therein relates to a time division multiplex process for controlling the access of various communication nodes to a common transmission medium. Paragraph [0009] of Budde et al. describes a technical problem to be addressed, namely instances when an

“incorrect” [malfunctioning] node starts sending an invalid message with which other nodes will be incapable of synchronizing and also “blocks” the system. As explained in paragraph [0010], the transmission of the invalid message serves to permanently obstruct starting of the entire system through the repeated transmission of the invalid messages. As indicated in paragraph [0011], the invention of Budde et al. is therefore to provide an alternative communications system that safeguards a reliable system start in the case of an incorrectly transmitting node.

Paragraph [0039] of Budde et al. describes the use of a time frame of a TDMA signal comprising a static part 6 and a dynamic part 7. Other than FIG. 4, which suggests that the dynamic part 7 comprises a time slot, Budde et al. does not describe the structure of the “dynamic part” further. It therefore appears that the assertion, in the final paragraph on page 3 of the Office Action, that the start and end of a time slot is indicative of a transmission action point was inferred from Budde et al., because no specific teaching can be found by the Applicant.

In any event, Budde et al. does not provide details of the full hierarchical structure of the dynamic section of a frame. Indeed, the Office Action admits that Budde et al. does not disclose that each consecutive timeslot comprises at least two sub-time slots or means for incrementing the communication slot number if there is no communication and to suspend increment of the communication slot number if communication is ongoing at the end of a time slot.

Page 4 of the Office Action therefore points to Stacey et al. as disclosing these missing features.

Stacey et al. relates to the field of communications. However, communications is a very large field and Stacey et al. relates to a very different aspect of the field of communications to the present invention or Budde et al., namely communication using hybrid fiber/coax networks for cable television services (col. 1, lines 9-11). Consequently, Stacey et al. relates to the field of Asynchronous Transfer Mode (ATM) communications and solution of the problem of echo signal delay in an ATM network (see col. 1, lines 58-65 and col. 2, lines 35-51).

Col. 3, lines 25-29 and col. 4, lines 37-41 of Stacey et al. describes an access medium consisting of a regular stream of TDMA structures termed mini-slots which are

created by subdivision of TDMA time slots and which contain, typically, 8 bytes of payload data together with associated overhead information. The invention of Stacey et al. does not concern media access, but rather usage of already-allocated bandwidth of one node by different services of the same node. Indeed, use of the term “upstream bandwidth” supports this understanding that the invention of Stacey et al. relates to a single node making better use of bandwidth available to the node.

The point raised in the Office Action concerning concatenation of mini-slots is not understood by the Applicant, because Applicant’s invention does not concatenate mini-slots as the mini-slots are simply used as a “timing grid” that nodes are able to use to identify a point in time when transmission should start and end.

Referring to Claim 1, Claim 1 recites a communications system for providing media arbitration via a communications protocol using consecutive communication slots, the system comprising:

- a plurality of communication nodes, each node arranged for communicating frames of data with the other nodes during a dynamic section comprising dynamic communication slots, each having a communication slot number; wherein each of the plurality of communication nodes includes:
- a time base comprising consecutive timeslots, associated with the dynamic communication slots, each consecutive timeslot comprises at least two sub-time slots and a transmission action point located at a boundary between two of the at least two sub-time slots such that transmission of each frame of data starts and ends at a transmission action point and
- means for determining a communication slot number operable to increment the communication slot number if no communication is ongoing at the end of a time slot and to suspend incrementation of the communication slot number if communication is ongoing at the end of a time slot.

However, and with particular reference to the underlined feature of Claim 1 above, the teachings of cited Budde et al. in combination with Stacey et al. fail to teach the provision of a transmission action point located at a boundary between two of the at

least two sub-time slots, as recited in Claim 1. In this respect, the identity of the “at least two sub-time slots” should be in the context of the hierarchical structure recited in Claim 1. The transmission action point provided therefore resides inside the consecutive timeslot to which the at least two sub-time slots relate and this is not disclosed by Budde et al. and Stacey et al.

Additionally, it is submitted that the skilled person would not contemplate combining the teachings of Budde et al. with Stacey et al., because Stacey et al. relates to the field of ATM and the architecture thereof is markedly different to the structure recited in Claim 1. Furthermore, even if the skilled person were to contemplate combination of the teachings of Budde et al. and Stacey et al., the fact that the structure asserted in the Office Action from Stacey et al. applies to more efficient use of bandwidth by a single node as opposed to multiple nodes serves as a deterrent to the skilled person to make the combination. Hence, the skilled person faced with the disclosures of Budde et al. and Stacey et al. would conclude that the two citations are technically incompatible.

Turning to the reasons advanced in the Office Action for combining the teachings of Budde et al. with Stacey et al., it is submitted that the reason provided: “*to decrease packetization delay caused by packet/cell compression*”, is conclusionary. It does not set forth how the combination of the two references would obtain the stated benefit, namely improved media arbitration. “Rejections on obviousness cannot be sustained by mere conclusionary statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” KSR, 550 U.S. at \_\_\_, 82 USPQ2d at 1396. In this respect, the statement provided (“*to decrease packetization delay caused by packet/cell compression*”) is indeed a conclusionary statement and not articulated reasoning and so a sufficient reason has not been provided. See also Ex parte Penhasi, BPAI Appeal No. 2007-2534 (December 13, 2007) (“The Examiner has not articulated a sufficient reason why one skilled in the art would have modified [the art] and arrived at the presently claimed subject matter.”). It is therefore submitted that the Office Action has not satisfied the necessary criteria of providing a reasoning to modify Budde et al. and so the rejection raised is improperly formulated.

In view of the reasoning provided above, Applicant submits that Budde et al. in view of Stacey et al. does not render Claim 1 obvious.

Claims 4 to 12 depend from Claim 1. By virtue of this dependence, Claims 4 to 12 are also not obvious.

Claim 2 is directed to a communication node and corresponds to the system of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 2. As such, it is therefore respectfully submitted that the teachings of Budde et al. in combination with Stacey et al. fail to teach a transmission action point located at a boundary between two of the at least two sub-time slots, as recited in Claim 2.

In view of the reasoning provided above, Applicant submits that Budde et al. in view of Stacey et al. does not render Claim 2 obvious.

Claim 3 is a method claim corresponding to the system of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 3. As such, it is therefore respectfully submitted that the teachings of Budde et al. in combination with Stacey et al. fail to teach a transmission action point located at a boundary between two of the at least two sub-time slots, as recited in Claim 3.

In view of the reasoning provided above, Applicant submits that Budde et al. in view of Stacey et al. does not render Claim 3 obvious.

Claims 13 to 20 depend from Claim 3. By virtue of this dependence, Claims 13 to 20 are also not obvious.

The case is believed to be in condition for allowance and notice to such effect is respectfully requested. If there is any issue that may be resolved, the Examiner is respectfully requested to telephone the undersigned.

If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is hereby authorized to credit or debit Deposit Account 503079, Freescale Semiconductor, Inc.

Respectfully submitted,

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